DUKE UNIV. LIBRARY
DURHAM, N. C.
NOV 25 1939

EDUCATIONAL RESEARCH BULLETIN: ERB

NOVEMBER 15, 1939

COLLEGE OF EDUCATION
THE OHIO STATE UNIVERSITY

Vol. XVIII, No. 8

EDUCATIONAL RESEARCH BULLETIN

(Entered in the United States Patent Office)

W. W. CHARTERS ..... *Editor*
J. MACLATCHY ..... *Assistant Editor*

PUBLISHED MONTHLY BY THE BUREAU OF EDUCATIONAL RESEARCH, OHIO STATE UNIVERSITY, FOR THE SCHOOLS OF OHIO. EDITORIAL AND BUSINESS OFFICES, ROOM 203, COLLEGE OF EDUCATION, COLUMBUS, OHIO

CONTENTS

The Relation of Employment to Scholarship 203
C. W. REEDER AND S. C. NEWMAN, *Ohio State University*

Pupil Transportation in Ohio 215
C. D. HUTCHINS, *State of Ohio Department of Education*
T. C. HOLY, *Ohio State University*

Editorial Comment 223

Readings 225

BOOKS TO READ—*Fundamental Psychology; Subject Index to Readers; The Adolescent Period: a Graphic and Pictorial Atlas; Prediction and Prevention of Reading Difficulties; Literature as Exploration; An Orientation in Science; The Problem of Vocational Guidance; Educational Work in Museums of the United States; Investigations of Vocabulary in Textbooks of Science for Secondary Schools; Poetry Preferences in the Junior High School; Activity Books for School Libraries; The Education of Youth for Leadership; Training in Democracy: the New Schools of Czechoslovakia; Supervision in German Elementary Education, 1918–1933; Social Psychology of Adolescence.*

THE EDUCATIONAL RESEARCH BULLETIN is published monthly except during June, July, and August. Entered as Second-Class Matter, February 9, 1922, at the Post-Office at Columbus, Ohio, under the Act of August 24, 1912. Accepted for mailing at specified rates of postage provided for in Section 1103, Act of October 3, 1917, authorized February 21, 1922.

Educational Research Bulletin
NOVEMBER 15, 1939
Vol. XVIII, No. 8

The Relation of Employment to Scholarship

By C. W. REEDER AND S. C. NEWMAN

IT IS generally known both inside and outside our colleges and universities that a certain percentage of the students enrolled in these schools is engaged in outside employment either for partial or full self-support. The world places halos over the heads of those individuals who succeed in working their way through school. The stories of their experiences are interesting, but there is another side to this situation. Many of the employed students fail in their school studies and are eliminated from the colleges. No halos are placed over their heads by an acclaiming world.

The presence of so much employment in a college population naturally raises the question of its effect on the workers. Almost universally there is the belief that scholarship is affected. Participation in extra-curricular activities is restricted or totally prohibited. Health may be impaired. Sleep is reduced. Meals are skipped. Worry over the personal financial situation in addition to the economic problems of the home keeps the mind disturbed. Comparisons with the more favored individuals induce feelings of inferiority and resentment.

In order to compensate for the disadvantages which are assumed to be inherent in employment, all sorts of favors and concessions are made to the working students. Special schedule permits are issued allowing preference for class hours. Less than the required number of hours is permitted on the plea of employment. Courses are dropped from the schedules of workers without a great deal of opposition if employment is alleged. Re-admissions are granted liberally to students who plead employment as an excuse, and indicate changed plans for financing. Excuses from university requirements such as military parades have been issued because employment conflicted with

university obligations. On the whole the employed student occupies a favored position, getting numerous concessions not usually granted to non-workers.

Doubt, however, has arisen concerning the correctness of these assumptions. Maybe employment in and of itself is not the cause of the maladjustments among the working students. Maybe the same problems would arise even if the financial situation were improved over night, and employment could be abandoned.

To get an answer to one of these questions, the present study was undertaken. On a matched and paired basis,[1] it was proposed to see what effect employment has had on the academic record of the Freshmen entering the College of Commerce and Administration of the Ohio State University in the Autumn Quarter, 1937. Workers were paired with non-workers, and the academic records were studied to see what differences in scholarship had developed.

In arranging the pairs, it was decided to confine this study to men only. This was necessary because there were so few women in the class who were working that no accurate conclusions could be drawn from such a small number. Next, intelligence was held equal, a difference of five percentiles being allowed in individual cases on the scores made on the University intelligence test. High-school scholarship rank was also held equal, the classifications being by upper, middle, or lower third of the graduating classes. Where possible within these broad groups, the exact scholarship rank was kept equal. Nationalities were also observed. Jew was matched with Jew, Italian with Italian, and American white with American white. Similar matches were arranged for other groups. Negroes were excluded from the study because there were only three employed among those studied, and no matches could be found for them. With high-school record, intelligence, sex, and nationality kept equal, employment was the factor allowed to vary. Extreme care was exercised to get the employment records of these students. The same, or greater care, was exercised with the non-workers, to see that they did not work in the period covered by this study. The groups, therefore, are mutually exclusive on the employment factor. Still further differentiating factors were observed in the selection of the workers. No

[1] The pairs of students in this study were arranged by Miss Agnes Vavrek.

one was included in the study unless he was working fifteen hours or more a week. Saturday-only workers and the appointees to *NYA* positions were excluded. Only when an *NYA* student had a second job was he included in this study. Furthermore, every student included in this study had completed at least one quarter's residence in school. When all the sifting and sorting was done, there were 123 matched pairs of students that could be used as a basis for this study.

THE employment engaged in by these men was varied, all the way from the meal job in a restaurant to the operation of a sanding machine on a private contractual basis or the management of the bottling department of a local brewery. The largest number of jobs was found in the sales field, extending from the local department stores to the shoe, drug, and grocery fields, then to magazines, books, and ice.

Next in importance was employment in restaurants and in the fraternity and sorority houses. These students worked as cooks or dishwashers in the kitchens and as waiters.

Closely following in number was the group employed in clerical positions. These students worked in various business offices, banks, libraries, and in several of the state offices.

Next in order were the factory operators or manual workers. Jobs in this group included loaders of trucks, farm workers, operator of a dividing machine in a bakery, garage workers, repairmen of various types, printer, greenhouse worker, and a member of a suburban fire department.

As might be expected, there were a number of jobs in the service fields. These included the men working in the filling stations and parking lots, running elevators, watching railroad crossings, checking goods in checkrooms, and "hopping" for guests in the hotels.

Last in order was a small group that included two members of dance bands, an usher in a motion-picture theater, a sound monitor, and a projectionist.

The range of working hours for the employed ran from 15 to 50 per week. Nearly two-thirds of the workers were spending from 15 to 25 hours per week in employment. This may be compared roughly to a part-time job where one might work from eight o'clock in the morning to twelve or from one to five in the afternoon, either with or without Saturday included.

The question is often asked, "If a student begins to work as a Freshman, does he continue to work as long as he remains in school?" The answer to this question in most cases is, "yes."

In the employed group under study, 59 students had been in school for six quarters, or two full years. The extent of employment over this period was checked for each student. Only for isolated quarters was anyone in the group without work. Once working, always working, seems to be the experience of almost all the employed students.

THE median intelligence-test percentile for the employed group was 49 as contrasted with the median of 55 for the freshman class entering the College in the Autumn Quarter of 1937. The first and third quartiles were 29 and 73, respectively, for the employed group, as against 31 and 83 for the entire class. In point of numbers, 46 students in this group of workers were above the median on the intelligence test for the college, while 77 were below that position. It is evident, therefore, that approximately two-thirds of the working group were below the college average on the results of the University intelligence test.

In the employed group there were 29 students, or 24 per cent, who were graduated from high school with records that placed them in the upper third of their classes. In the freshman class entering the College in the Autumn Quarter of 1937, 36 per cent of the entire group were from the upper third. The workers were below the college average. In the middle third there were 55, or 45 per cent of the employed group. The class average was 40 per cent. In this classification, the workers were in greater proportion than for the entire freshman class. In the lower third of the graduating class there were 39, or 32 per cent of the group. The class average was 24 per cent. Here, again, the working group exceeded the freshman-class average. Summarizing the high-school situation, the workers came in greater proportion from the middle and lower thirds of their high-school classes, than from the upper third.

While no effort was made in this study to hold the date of graduation from high-school uniform, it is interesting to note the graduating years represented in the two groups of workers and non-workers. These are shown in Table I. It is evident that there is greater delay in getting to college by the workers

than by the non-workers. Practically one-half of the workers were delayed one or more years in their enrollment in the College as contrasted with 30 per cent of their matched pairs.

TABLE I

DATE OF GRADUATION FROM HIGH SCHOOL

Year of Graduation	Number of Workers	Number of Non-Workers
(1)	(2)	(3)
1931	.....	1
1932	5	2
1933	6	1
1934	8	4
1935	19	8
1936	22	21
1937	63	86
Total	123	123

TABLE II

OCCUPATIONS OF PARENTS

Occupational Classification	Number of Workers	Number of Non-workers
(1)	(2)	(3)
Professional	6	12
Semi-professional	47	62
Clerical and commercial	45	43
Semi-skilled	15	3
Unskilled	2	.....
Retired, unclassified	8	3
Total	123	123

TABLE III

PERSISTENCE IN COLLEGE EXPRESSED AS PERCENTAGES OF THE VARIOUS GROUPS

Number of Quarters Completed	Percentage of Group		College Average	Matched Pairs
	Workers	Non-Workers		Per Cent
(1)	(2)	(3)	(4)	(5)
1	100	100	98	100
2	85	95	86	81
3	77	87	77	69
4	60	69	60	42
5	51	60	55	32
6	47	54	49	24

Since the Ohio State University is located in a metropolitan area of approximately 375,000 population, it is only natural that a large proportion of its student body should be from the

local vicinity. One-third, or 41, of the workers were residents of Columbus or of the suburban area. This proportion is less than that of the total local contingent. In other words, two-thirds of the workers are non-residents. This factor is undoubtedly one explanation of the need for employment—they need to work to meet their expenses in living away from home.

TABLE IV

SCHOLARSHIP—POINT-RATIOS*

	GROUP ANALYSIS		MATCHED-PAIR ANALYSIS		1937 FRESHMAN CLASS AVERAGE
	Workers	Non-Workers	Workers	Non-Workers	
(1)	(2)	(3)	(4)	(5)	(6)
First Quarter—					
Third quartile..	2.33	2.41	2.33	2.41	2.44
Median	1.88	2.00	1.88	2.00	2.05
First quartile...	1.25	1.46	1.25	1.46	1.47
Second Quarter—					
Third quartile..	2.36	2.45	2.38	2.51	.....
Median	1.91	2.02	1.89	2.14	.....
First quartile...	1.48	1.60	1.48	1.62	.....
Third Quarter—					
Third quartile..	2.36	2.46	2.38	2.48	2.46
Median	1.94	2.11	1.96	2.21	2.04
First quartile...	1.55	1.69	1.55	1.77	1.63
Fourth Quarter—					
Third quartile..	2.38	2.48	2.44	2.48	.....
Median	1.98	2.04	2.00	2.01	.....
First quartile...	1.63	1.72	1.63	1.76	.....
Fifth Quarter—					
Third quartile..	2.38	2.63	2.46	2.54	.....
Median	2.00	2.09	2.05	2.08	.....
First quartile...	1.72	1.83	1.70	1.88	.....
Sixth Quarter—					
Third quartile..	2.46	2.46	2.54	2.44	.....
Median	2.05	1.98	2.14	1.98	.....
First quartile...	1.73	1.83	1.86	1.85	.....

* These are computed for the numbers of pairs expressed as percentages in Table III.

A comparison of the occupational backgrounds of the working and non-working groups was made in order to see more clearly the economic position of the family group from which the students came. Table II shows the relationship. It is evident that more non-workers came from the higher professional and semi-professional groups than did the workers. From the general clerical and commercial positions, the groups were practically identical. In the semi-skilled and unskilled occupations,

the workers exceeded the non-workers. The situation, therefore, is quite clear. The working students are coming from homes in which the occupational level, and earnings, are on a generally lower level than are their competitors who are not forced to engage in employment.

Two methods were used to measure the ability of the workers and non-workers to stick in school—the group analysis and the matched-pair analysis; these are summarized in Table III. This table should be read in this way. During the second quarter in school 85 per cent of the original group of 123 workers were in residence (*see* Column 2). Among the non-workers 95 per cent of the original group continued in residence (*see* Column 3). These percentages of persistence, when compared with the college average (*see* Column 4), show two trends: the workers are leaving in about the same proportion as the average, while the non-workers are remaining in school in greater proportion than the average. When the analysis is made for the matched pairs (*see* Column 5), there the losses in residence are greater than the average.

When the two-year record is analyzed, it is evident that the losses quarter by quarter among the workers are greater than among the non-workers. Furthermore, the losses among the workers exceed the college average, while the losses from the non-working group are less than the average. The losses in both groups show up rather dramatically when the records of the matched pairs are examined. Only 30 pairs, or 24 per cent, succeeded in remaining two full years in school.

IN THE Ohio State University the scholarship standard is expressed in terms of a point-ratio. The letter marks are assigned the following weights: *A*, 4; *B*, 3; *C*, 2; *D*, 1; *E*, 0. If the honor-points are divided by the hours of credit undertaken, the result is a ratio which is utilized in the determination of a student's standing. As quarter follows quarter, the hours and points are added to each other and a cumulative ratio is worked out. The minimum standard for a satisfactory record is a 1.8 ratio, or the basis set for graduation.

In this study two methods were followed for analyzing the scholastic attainments of the workers and non-workers, the group analysis and the matched-pair analysis. In Table IV are presented the quartiles of the point-ratios for the first quarter,

TABLE V

HOURS OF EMPLOYMENT AND SCHOLARSHIP

WEEKLY HOURS OF EMPLOYMENT	WORKERS		NON-WORKERS (MATCHED PAIRS)	
	Number with Satisfactory Records	Number with Unsatisfactory Records	Number with Satisfactory Records	Number with Unsatisfactory Records
(1)	(2)	(3)	(4)	(5)
15–19	15	12	14	13
20–24	19	17	23	13
25–29	11	13	12	12
30–34	7	10	7	10
35–39	6	1	2	5
40–44	2	6	7	1
45 and over	2	2	3	1
Total	62	61	68	55

TABLE VI

QUARTERS OF RESIDENCE COMPLETED, SCHOLARSHIP, AND HOURS OF EMPLOYMENT FOR THE WORKERS AND FOR THE NON-WORKERS

HOURS OF EMPLOYMENT	SATISFACTORY ACADEMIC RECORDS						UNSATISFACTORY ACADEMIC RECORDS					
	Quarters of Residence Completed						Quarters of Residence Completed					
	1	2	3	4	5	6	1	2	3	4	5	6
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
	Workers											
15–19	15	15	14	12	11	11	12	10	10	7	4	2
20–24	19	19	19	17	16	15	17	14	12	9	8	7
25–29	11	10	10	7	7	7	13	8	6	2	2	1
30–34	7	7	7	4	3	3	10	8	7	5	3	..
35–39	6	6	6	4	4	4	1	1	1	1	1	1
40–44	2	2	2	2	2	2	6	5	3	3	1	..
45 and over	2	2	2	2	2	2	2	2	1	1	1	1
Total	62	61	60	48	45	44	61	48	40	28	20	12
	Non-Workers											
15–19	14	14	14	12	11	11	13	10	9	5	2	2
20–24	23	23	23	19	18	17	13	13	9	7	6	5
25–29	12	12	12	10	10	10	12	11	10	8	6	4
30–34	7	7	7	6	6	5	10	8	6	4	4	2
35–39	2	2	2	2	2	2	5	5	4	2	2	1
40–44	7	7	7	6	6	4	1	1	1	..	..	..
45 and over	3	3	3	3	2	2	1	1	1	1	..	..
Total	68	68	68	58	55	51	55	49	40	27	20	14

and the cumulative ratios at the end of the second, third, fourth, fifth, and sixth quarters of residence in the University.

The most significant deduction from this table is the slight

differences between the scholarship point-ratios of the workers and of the non-workers. It is so small that it can hardly be figured in terms of a letter mark in a single major course. The comparison holds whether the groups are analyzed or whether the matched pairs are used. While the scholarship records of the workers are slightly below the records of the non-workers, the differences are statistically insignificant. The same conclusion follows when the comparison is made between the records of the workers and of the entire freshman class. Differences are almost negligible. If the experience of these groups of students is any criterion, then it must be concluded that employment in and of itself does not seem to affect the scholastic records much. The use of employment as an excuse for poor marks would appear to be mere rationalization.

An assumption which is current in college circles is that longer hours of employment are more harmful to scholarship than are shorter ones. Table V shows the experiences of the matched pairs under analysis in this study. The last cumulative ratio of record is the determiner of scholastic success. If this ratio is less than 1.8, then the student's academic record is unsatisfactory; if above 1.8, then he is regarded as having a satisfactory standing in his course.

It would appear that there is little relationship between the hours that students work and their scholarship. The chances seem to be fifty-fifty for a satisfactory or an unsatisfactory school record, no matter how much or how little he works.

To test this tentative conclusion further, a coefficient of correlation was run between the hours of work and the grade-point ratio at the end of the first quarter; r was $+.16$. This would seem to indicate that little relationship exists between these two factors. Furthermore, this relationship tends to persist as long as the students remain in school. Evidence of this fact is the close correlation between the first-quarter point-ratio and the last cumulative one on record; r is $+.90$ for this group of workers.

OBSERVATIONS have led to the assumption that working students tend to give up the educational quest in greater proportion than do non-workers. The experiences of these groups were checked to see how valid this assumption is; the summary is given in Table VI, which should be read: 15 stu-

dents who are employed from 15 to 19 hours per week completed one quarter's work in the college satisfactorily, while 12 students working the same hours failed to attain satisfactory academic standing. For their matched pairs, 14 had satisfactory records, while 13 did not. A close study of the table will show that as long as the scholastic record is satisfactory, both workers and non-workers tend to remain in school in greater proportion for more quarters than do the students with unsatisfactory records. If the record is unsatisfactory, then the tendency is to drop out early. There appears to be little difference in the experience of these students, whether they work or not. Furthermore, it is difficult to find any number of working hours that seem to be more critical than others. Again it appears that there is little relationship between the hours worked and the number of quarters of residence in school.

TABLE VII

INTELLIGENCE AND SCHOLARSHIP FOR WORKERS AND NON-WORKERS

Intelligence-Test Percentile	Number of Pairs	Unsatisfactory Record	Per Cent	Unsatisfactory Record	Per Cent
(1)	(2)	(3)	(4)	(5)	(6)
		Workers		Non-Workers (Matched pairs)	
91–100	10	1	10	1	10
81–90	10	2	20	1	10
71–80	15	5	33	5	33
61–70	10	3	30	7	70
51–60	14	6	43	4	29
41–50	17	9	53	7	41
31–40	12	8	66	5	41
21–30	17	10	59	11	59
11–20	14	13	93	10	71
1–10	4	4	100	4	100
Total	123	61		55	

STUDENTS who are carrying heavy employment loads are frequently advised to reduce their academic requirements in order that better marks may be attained. In the working group included in this study, there were 38 students who for one reason or another had a reduced schedule for one or more quarters. This was approximately one-third of the total group. Courses had been dropped to lighten the load, or to bring the time budgets into better balance. The students with the adjusted schedules were working on the average of 25 hours per week. Taking the last cumulative academic records, sixteen had satis-

factory scholastic records, while twenty-two had unsatisfactory records. Evidently it did not make much difference scholastically whether working students carried full or reduced schedules.

The tragedy of the college is the dismissal of a student for poor scholarship. The following table reveals the experiences with these two groups of workers and non-workers:

At the End of:	Number of Workers	Number of Non-Workers
First quarter	5	7
Second quarter	11	11
Third quarter	5	5
Fourth quarter	4	5
Fifth quarter	7	4
Sixth quarter	10	7
Total	42	39

This table indicates multiple dismissals, since some re-admissions were granted. In no case did a re-admitted student, worker or non-worker, make good scholastically after dismissal and re-admission. Among the workers, 31 students were involved in these dismissal proceedings, while 32 non-workers were dismissed. The experience of the two groups is similar. A slight increase in dismissals is noted among the workers in the fifth and sixth quarters.

Since we have examined many other factors, there now remains to determine what is the relationship of intelligence to employment, and to the academic success of the workers. A correlation was run between the hours of employment and the intelligence-test percentiles; r was $-.21$. When, however, a correlation was run between the cumulative point-ratios of last record and the intelligence-test percentiles, r was $+.43$. While this coefficient is not so high as it usually runs for this correlation, it does show that the factor which has some significance in the matter of marks is intelligence. Furthermore, as intelligence increases among the workers and non-workers, the percentage of unsatisfactory work decreases. While every interdecile group does not square perfectly with this statement, yet the general trend is fairly well marked. Intelligence is the factor that is significant. Table VII contains the data for this conclusion.

IF THE conclusions based on two years of experience of a group of 246 students who entered the College of Commerce in the Autumn Quarter of 1937 are any criterion, then the factor

of employment does not hold the crucial position it has been given traditionally. The two groups of workers and non-workers, matched carefully as to high-school records, intelligence-test scores, sex, and nationality, turned in almost identical performances in scholarship over a two-year period. The use of outside employment as an excuse or alibi for failure, dismissals, absences, and requests for re-admission, is sheer rationalization. The non-workers have almost the same identical academic experiences. If a student has the mental capacity, he can work without fear of poor marks.

There are other phases of the employment situation which have not been explored in this study. No effort was made to investigate the participation or lack of participation in extra-curricular activities; of denial or lack of denial of the means for social expression in attending dances, motion-picture shows, and concerts; of acceptance or non-acceptance of unsatisfactory living arrangements and eating accommodations; of the absence or lack of absence of current magazines, newspapers, and books for leisure reading; of the attitudes of resentment or lack of resentment over the economic situation; or of the demand or lack of demand made on the physical resources. Just what effect employment has on these and other phases of personality and social development has not been considered here. These questions must be taken in account, as well as scholarship, when the problem of employment arises in a student's university life. Perhaps at a later date another study will be projected into these areas. For the moment, emphasis has been laid on the scholarship factor only, to see what relation employment or lack of employment had to it.

Pupil Transporation in Ohio

By C. D. HUTCHINS AND T. C. HOLY

THE School Foundation Program Act passed on June 12, 1935, contains the following provisions regarding the duties of the director of education in connection with the pupil-transportation program of the state:

SEC. 7695–1*c*. SUBSEC. (*d*) For districts in which transportation of pupils is necessary, an amount equal to the approved cost of such transportation service which shall be in addition to the amounts specified in paragraphs (*a*) and (*b*) or (*c*) of this section.

The director of education shall prescribe regulations governing methods and means of transportation and shall make recommendations as to the cost of foundation programs for pupil transportation in districts in which transportation is deemed necessary. The effects of sparsity of population and of other conditions reasonably beyond the control of the board of education of the school district shall be considered in the determination of such transportation costs. The costs of transportation in all instances shall be determined and fixed by the local boards of education, but not to exceed that recommended by the director of education.[1]

Because of this requirement in the law which in 1937–38 entailed a state subsidy to pupil transportation of $5,500,000, it was essential that a comprehensive study be made as a basis for determining how this large amount of state funds could be most equitably distributed among the nearly fifteen hundred school districts offering transportation services. To that end, then, such a study, carried on in conjunction with the *Study of Local School Units in Ohio*,[2] was begun in August, 1936, and continued until September, 1937. Now that the plan as worked out in this study has been in operation for the entire year of 1938–39 and is being used with slight changes in 1939–40, it is the purpose of this article to review briefly the study and the application of its findings to pupil transportation in the state.

The School Foundation Program Act required the director of education to recommend a cost of pupil transportation for each of the districts having pupil-transportation programs. For the first year after the enactment of the law, 1935–36, the Department of Education proceeded with the transportation

[1] Sutton, D. H., compiler and editor. *Ohio School Laws. Supplementary 1934 Edition.* Columbus, Ohio: State Department of Education. 1938. p. 115.

[2] A brief résumé of this study will be found in the EDUCATIONAL RESEARCH BULLETIN, XVI (October 20, 1937), pp. 169–82.

plan which had been used in the approximately eight hundred districts in the state formerly participating in the educational equalization fund. This plan involved the use of a table from which could be read an approved cost for each bus route on the basis of two items of information—pupils and miles. It was merely necessary to note the number of pupils transported by the bus and the number of miles traveled by the bus each day in order to apply the table and obtain a reasonable cost figure. The new law implied that other factors which influence the cost of transportation should be recognized in determining the recommended cost for any district. Thus, the determination of the effect of various factors upon the cost of transportation and the extent to which these factors might be used in calculating reasonable costs were taken as the essential purposes of the study.

In recognizing the cost of transportation, a state might pay a flat rate per pupil, such as the ten cents per pupil per day provided by the state of Texas. While this plan appears to be fair in that the same amount is allowed for each child, it does not take into consideration the well-known fact that varying conditions in school districts necessarily produce varying costs per pupil. It is essential, therefore, that the state should recognize factors which influence the costs, such as the equipment used, the condition of the roads, the size of the vehicle used, the number of children transported, and the density of population. If adequate equipment is to be supplied, the state should pay a larger amount for excellent equipment than for poor and unsafe busses. The cost in a poor-road area may be two or three times as much per pupil as in a district having level, hard-surfaced roads, while the cost per pupil is much greater in a district which needs to use small vehicles than in a district that is able to use large vehicles. Furthermore, the cost of transportation in a densely settled area may be one-third as much per pupil as the cost in a sparsely settled area. Similarly, many other factors do influence the cost of transportation and need to be recognized by the state if the distribution of funds for transportation is not to result in inequalities. The fact that districts necessarily having higher costs of transportation are usually less able to pay these costs than districts in which influential factors produce lower costs, further demands that the essential factors should be recognized by the state.

In the Ohio study a long list of factors which are regarded as influencing the cost of transportation was obtained from bulletins on transportation costs issued by the various state departments of education. The relationship existing between such factors and the cost of transportation was determined by means of correlation tables prepared on the basis of data for 7,366 bus routes operating in Ohio during the 1936–37 school year. Out of this statistical work emerged nine factors which appeared to be highly influential in affecting the cost of transportation. Of these nine, three of them—number of pupils, density, and road condition—are largely beyond the control of the board of education, while the other six—pupils per bus, investment per pupil, trips per bus, capacity utilization, extent of board ownership, and direction of seating—are managerial factors and are therefore chiefly under the control of the board of education.

THE three significant factors beyond the control of the board of education were then employed in the development of a regression equation from which might be calculated a reasonable cost of transportation for each district. This equation is as follows:

$$X_0 = 5.136851 - 1.640168 \log X_1 - .013534 X_2 + .006414 X_3$$

When

X_0 = the predicted cost per pupil per month
X_1 = the number of pupils transported in the district
X_2 = the density (transported pupils per square mile)
X_3 = an index representing the condition of the roads (this index is obtained by combining the per cent of the roads which are of high type, and twice the per cent of mediocre miles with three times the per cent unimproved)

The amount determined for any district by this regression equation may be considered as the proper amount for the transportation program based upon a recognition of the three most influential factors beyond the control of the board of education and assuming similar managerial policies. It is obvious, however, that the managerial policies cannot be assumed to be similar in all districts because some boards of education have more acceptable policies than others.

The situation with regard to the six managerial factors was therefore used to develop adjustments to the calculated cost produced by the regression equation. This procedure produces

a calculated cost of pupil transportation which recognizes not only the more significant factors beyond the control of the board of education, but also the six most influential factors of management. In view of the difficulty involved in solving the equation and in giving effect to the managerial factors, it appeared impracticable to present this procedure to the districts of the state. On the other hand, it was essential that the plan to be used in calculating recommended costs be given to the boards of education in such form that the calculation could be performed by those in charge of the schools in any district. To simplify the presentation, three tables were prepared for the three factors included in the regression equation. The board members and school executives can note the situation in a district with regard to the three factors and then by referring to the tables, obtain coefficients which, when combined, give the same result which would be obtained by solving the regression equation. In a similar way, six tables were prepared for the six factors of management. Thus in applying the procedure to any district, the members of the board of education, or the school executive, note the situation with regard to the nine factors, and refer to the nine tables for the indicated increments and deductions, which, when combined, produce a reasonable amount for the transportation program of any district.[3]

The solution of the regression equation yielded the customary constant. This constant of +5.137 must be used in every application of the equation. Since every district also has a number of pupils transported and since a table was prepared for this factor, "number of pupils transported," it seemed possible to simplify the calculating procedure still further by combining the constant with the figures in the table for "number of pupils transported." The constant was handled separately in the calculations for the 1938–39 school year, but for 1939–40 the combination table is being used to reduce by one the number of operations necessary to perform the calculations. The application of the tables yields a recommended cost per pupil per month. This figure is then multiplied by the number of pupils transported and the product by the number of months, to obtain the recommended amount for the year.

These procedures were developed on the basis of data ob-

[3] These tables may be found in *Administration of Pupil Transportation.* Columbus, Ohio: State Department of Education, 1938. pp. 35–43. (Bulletin 2)

tained from the 7,366 bus routes in operation for the 1936–37 school year. After completion they were then applied to the data for the same year which gave many suggestions for improvements. Despite these steps to refine the plan further, it appeared in the summer of 1937 that it was not yet ready to be used as a basis of distributing the approximately $5,500,000 furnished by the state for transportation for the 1937–38 school year. Accordingly, to scrutinize the plan further, the procedures were applied to school-bus transportation data for the 1937–38 school year, and the plan further refined.

THE application and testing just mentioned provided further information, pointing toward possible revisions and refinements. After this second annual testing, it seemed that the plan was acceptable for use in the actual distribution of state funds. By action of the State Director of Education and the State Controlling Board, the plan was adopted as the policy of the Department of Education, to be used in determining recommended amounts for pupil transportation beginning in September, 1938. State funds therefore were distributed on the basis of this plan for the 1938–39 school year. On the basis of this experience school superintendents have expressed satisfaction with the plan, particularly emphasizing its fairness in that it recognizes those essential factors which influence the cost and does not stop with "pupils" and "miles" as did the former plan. Superintendents, however, have been somewhat uncertain because the factor "miles of bus travel," which had always appeared to be of significance, was not employed. While it is recognized that miles of bus travel is an important factor, it was found that its influence was quite well cared for through the density factor. The close relationship between these two factors will be recognized when it is observed that busses travel short distances in densely settled areas, and greater distances in sparsely settled areas. This explanation, however, has not completely satisfied the superintendents who thought that miles of bus travel should be recognized to satisfy a psychological demand, even though recognition of this factor contributes very little to greater accuracy. Accordingly, a new factor—"bus miles per square mile"—has been examined, and a new table prepared on the basis of data for the 1938–39 school year. The preparation of such a new table for an additional factor is not a difficult procedure.

It is merely necessary to tabulate the variations between actual and calculated costs per pupil per month as they are associated with the various numbers of "bus miles per square mile."

The adjustments growing out of the use of this additional factor have now been adopted and will be included in the procedures used for the 1939–40 school year. Its value lies in the fact that it provides some improvement in the correlation between calculated costs and actual costs, and in the further fact that it provides greater satisfaction with the plan since miles are not now to be ignored.

The amount recommended for any given district for the 1939–40 school year is calculated on the basis of such figures as are presented here:

a. Number of pupils transported	340
b. Number of vehicles used	6
c. Present value of school-bus equipment	$11,085
d. Total number of trips	7
e. Lineal feet of seating space	
f. Forward facing	243 *ft.*
g. Longitudinal	69 *ft.*
h. Total	312 *ft.*
i. Number of busses owned by board	3
j. Condition of roads	
k. High type 32 per cent	34.9 *mi.*
l. Mediocre 48 per cent	53.6 *mi.*
m. Unimproved 20 per cent	22.0 *mi.*
n. Total 100 per cent	110.5 *mi.*
o. Area of the school district	42 *sq.mi.*
p. Total miles busses are driven daily	192 *mi.*
q. Number of months busses will operate	9 *mo.*

Such essential information is then used to determine the status of the transportation of a school district with regard to the ten factors now employed. This status is then recorded in Column 2 of Table I and appropriate adjustments are then made from the tables mentioned earlier. The first three of these constitute the solution of the regression equation and the latter seven the adjustments directed by the seven most influential managerial factors. These ten figures are recorded in Column 3 of Table I and combined algebraically to give the recommended cost per pupil per month, which is then used as a basis for determining the recommended figure for the year. In calculating the figures

for Column 2 of this table, it is necessary to observe that the number of pupils transported is limited to those recognized by the state for this service. It excludes pupils who reside outside the district, pupils within one mile of the school, and a number of others defined in bulletins of the Department.

The addition of the tenth factor—"bus miles per square mile"—for use in 1939–40 is one evidence of the flexibility of the plan adopted for Ohio. Without an extensive amount of work, it is possible to add a new factor and a new table of adjustments, to care for some new situation which arises in the state. It would also be possible to eliminate a table if the factor

TABLE I

CALCULATION OF THE MAXIMUM COST OF PUPIL TRANSPORTATION FOR A SCHOOL DISTRICT

Factors	Status	Per Pupil per Month
(1)	(2)	(3)
Number of pupils transported (*a*)	340	$+1.237
Density (*a* divided by *o*)	8	− .180
Condition of roads (*j*, *k*, *l*, *m*, *n*)	188	+1.280
Pupils per vehicle (*a* divided by *b*)	57	− .194
Investment per pupil (*c* divided by *a*)	$ 33	+ .036
Trips per bus (*d* divided by *b*)	1.1	+ .069
Per cent of capacity utilized (*a* divided by *h*)	94	+ .019
Per cent of busses owned by board (*i* divided by *b*)	50	− .122
Per cent of seats facing forward (*f* divided by *h*)	78	+ .056
Bus miles per square mile (*p* divided by *o*)	4.6	− .022

Total amount per pupil per month	$ 2.179
Number of pupils (*a*)	340
Amount for one month	$ 740.86
Number of months (*q*)	9
Maximum amount for 1939–40	$6,667.74

becomes unimportant. Within a few years adjustments now provided for "per cent of forward-facing seats" will undoubtedly be eliminated because regulation now requires all new busses to be equipped with forward-facing seats. There is also a possibility that adjustments now provided for board ownership of busses may be eliminated within a short time. This factor provides increments and deductions for the extent of board ownership, producing a lower recommended cost in those districts which have board-owned busses. In such districts, the cost is actually lower, but the question of why the state should furnish more money to districts having contractor-owned equip-

ment and less money to districts which have board-owned equipment is arising more and more frequently. Many agree that the lower amount furnished to the district for board-owned equipment appears to be a penalty given to those boards which have attempted to co-operate by reducing the cost of transportation through public ownership.

A further feature of this plan is that any of the tables on factors of management can be eliminated without affecting the total cost of the transportation program of the state. In all of these tables, a zero adjustment is provided for the average situation in the state, and those districts which vary from the average are given increments and deductions which total zero for the entire state. Therefore, if changed conditions demand, the trend of adjustments for any factor can be changed, factors can be eliminated, or new factors added. This flexibility will permit the state distributive plan to keep adjusted to new factors as they arise and to eliminate others which become obsolete.

In conclusion, it may be said that the plan here briefly presented has worked most satisfactorily since its adoption in September, 1938. Furthermore, it has the necessary flexibility so it can be adapted to changed conditions as they arise. On the basis of this successful operation, we are convinced that the plan has materially aided the eight-thousand school board members in the state who are responsible for providing safe, comfortable, and economical transportation for the three hundred thousand pupils who are thus taken to and from school. If the measure of the worth of any study is in terms of its results, as we believe it should be, this comprehensive analysis of pupil transportation in Ohio has been most worth while.

EDITORIAL COMMENT

Areas of Experience

WHEN we began around the turn of the century to question the use of "subjects" as the most efficient form of "education for life," it became inevitable that we should be called upon to establish substitues since something had to be taught.

The first idea evolved by the advocates of a new order was the activities concept: the activities of children, based usually upon their interests. Here it was assumed that if we followed with fidelity interesting "activities" closely related to the lives of the children we were teaching, those skills and attitudes, facts and generalizations which were needed in following these activities through to a satisfactory conclusion would be the ones that would be needed "in life."

Then upon recognition that materials so selected appeared to be too casual for safety, and that curriculums so developed would be "ad libbed," as they say in radio circles, or "shot from the cuff," as the motion-picture producers characterize the process, a new concept began to evolve. This is the "areas of experience" idea. In effect it is assumed by this formula for selecting the content of the curriculum that experience may be divided into areas, and that the learner should be exposed to these areas to the extent that is necessary. Instead of saying, according to the subject formula, that a growing student should learn arithmetic, history, geography, or French, it is advocated that he should become competent in health, communication, civic problems, personality adjustment, or vocational choice. The question shifted from, "What subjects should he know?" to "What areas of experience should he explore?"

This formula for selecting curriculum content is now being analyzed by this generation of educationists and in the most variegated fashion. Indeed, one investigator has arrived at a master list of areas by amalgamating over sixty lists by different investigators that have appeared during the last decade or so. Eventually it is to be expected, if history repeats itself, that a general curriculum pattern will ultimately achieve nationwide acceptance.

In such case, it is obvious that the content of the "subjects" will not disappear from the educational scene. No matter what experiences the student is inducted into, whether from his own interests or by school prescription, there are still certain tools which he will still need: to write, to read, to spell, or to keep well. There are certain facts and principles now contained in the subjects which he will undoubtedly find useful: the origin and evolution of national ideals; the effects of environment on food, clothing, and shelter; or the laws of biology which influence health.

The difference between the applications of the two concepts will lie in the orientation of subject material and its functional organization. By the area formula the scholar's system of organizing subject content will be radically changed, and for the most part relegated to the deferred study of subject material when the adolescent youth is feeling for scholarly competency and interested in the clear-cut organization of scholarship within a field.

This displacement of the scholars' organization is giving rise to a heavy barrage of criticism from those who are conditioned to and comfortable in the system. But it remains to be proved that such organization is essential to common learning or that a logical organization cannot be achieved with whatever elements of a subject that are validated on functional grounds of use to the layman in general education.

What the outcomes of the conflict of the two formulas will be is not yet apparent. What is obvious is that the areas-of-experience formula is certain to be vigorously and widely explored during the next quarter-century, and the decision will rest upon the verdict of the educationists at that time. Evolving solutions have a way of combining the good points of both if one is an impartial observer with historical perspective, or of ruining the subject organization if one is fully conditioned to that as the only effective method of training children.

W.W.C.

READINGS

Books to Read

PAINTER, GEORGE STEPHEN. *Fundamental Psychology.* New York: Liveright Publishing Corporation, 1938. xxviii+519 pp.

The underlying point of view of this book may be seen from a statement in the Preface which refers to a "blind obsession to treat psychology as a natural science." It is, on the contrary, a science of consciousness in the classical fashion. The work starts, however, with a conventional discussion of the nervous system including most of the familiar diagrams. Almost one-third of the book is devoted to sensation. The discussion of affection follows Titchener's 1911 textbook fairly closely. Other sections deal with intellection, which includes memory, and volition, which includes will and attention. At the end we find a brief consideration of personality with practically no mention of any efforts to measure it. Among the missing topics which we ordinarily find in a modern psychology textbook are the techniques of measuring individual differences, psychology in everyday life, and a hint, at least, that the science is of some practical importance. A minor criticism concerns the footnote references which usually give the date but not the page and occasionally just the reverse. The most adverse criticism of the book is that aside from an occasional passing mention of some recent findings, it is about the type of textbook which would have been written twenty or twenty-five years ago.

HAROLD E. BURTT

RUE, ELOISE, compiler. *Subject Index to Readers.* Chicago: American Library Association, 1938. xviii+174 pp.

Here is a long wanted and badly needed index to the contents of readers for the primary grades. Pre-primary, primers, first, second, and third readers, and the easier supplementary readers are indexed for factual content. For units of work, activity programs, and for work with students who need encouragement by appealing to their special interests this volume will be a most helpful tool.

The subject list ranges from *accidents* to *zoos* and contains many helpful cross references. Each entry carries a symbol designating the grade suitability. Teachers and librarians have reason to be most grateful for this excellent publication.

RUTH E. SEEGER

SHUTTLEWORTH, FRANK K. *The Adolescent Period: a Graphic and Pictorial Atlas.* Washington, D. C.: National Research Council, 1938. v+231 pp. (Monograph of the Society for Research in Child Development, Serial No. 16)

This monograph is a compilation of graphs and pictures from various sources that have dealt with adolescent development. Although most of the graphs are as they appeared in the original sources, many have been drawn especially for this volume in order to present other data pictorially. The legends which accompany each graph explain the data and give the original

source. However, no attempt is made through narrative discussion to coordinate or evaluate the data thus presented. In light of most students' lack of ability, and aversion, for reading graphs and because of the choppiness in style arising from such a form of presentation, this monograph may not be as useful for the average undergraduate as would the same material presented in prose style. However, for the teacher this monograph represents a very handy and excellent collection of data for presentation in class with suitable explanation. A wide area has been covered in selecting the material presented, although some readers may feel that pubescent changes and other aspects of physical growth receive a disproportionate emphasis. Such material, however, was probably found to be more available and more easily represented pictorially. The reviewer would not hesitate to recommend this monograph to any worker in the field of adolescence.

F. P. Robinson

Stanger, Margaret A., and Donohue, Ellen K. *Prediction and Prevention of Reading Difficulties.* New York: Oxford University Press, 1937. ix+191 pp.

The misleading title of this excellent book suggests a far wider scope than is present. Instead of dealing with the large problem, it deals with a special variety of reading difficulties, those definitely related to sidedness and neurological upsets causing reading disabilities.

The handling of this special problem is careful, readable, and useful, with its three-step method: scientific background from Dr. Samuel T. Orton and other neurologists, tests for sidedness in specific problem-readers, and teaching methods for retarded pupils and for those likely to be retarded for causes of neurological origin.

All of the book should be of value to the teacher, but his greatest aid might well come from the first-rate case histories that seem to come from the Ethical Culture Schools where the authors have worked in this specialized area.

George McClellan

Rosenblatt, Louise M. *Literature as Exploration.* New York: D. Appleton-Century Company, 1938. 340 pp.

Louise Rosenblatt has made an important contribution to the literature on the teaching of English in this penetrating analysis of the nature of the literary experience and its implications for teaching, made for the Commission on Human Relations of the Progressive Education Association. The teaching of literature should not be restricted to acquainting the student with literary history, techniques, and conventions but should be broadened to include insights into the nature of human relations, societal organizations, and guidance in the formation of fundamental social concepts. Reading should enable the student to orient himself to his social milieu, and gain an objective understanding of himself, if the proper opportunities for discussion are provided. Literature is able to do this since study of it "brings about linkage between intellectual perception and emotional drive."

Dividing her book into three parts Miss Rosenblatt first discusses "the province of literature," which includes an analysis of the psychology of the literary experience and the material which literature presents for teaching; the second part, "The Human Basis of Literary Sensitivity," is concerned

with the teaching processes implied by this concept of literary experience; the last section of the book, "The Literary Activity as the Basis for Human Insight," presents some of the basic social understandings which should concern the teacher of literature, and which the study of literature provides an opportunity of developing.

Although the major emphasis of the book is on the social concepts which should be considered within the province of the literature class, Miss Rosenblatt does not believe that the aesthetic appreciation of literature should be ignored but that the two approaches should supplement each other. This book is not only of significance for the classroom teacher, but has important implications for those engaged in training teachers of literature. English teachers generally are finding this the most important book in the field of the last twenty years.

GEORGE SALT

WATKEYS, C. W., AND TEN MEMBERS OF THE FACULTY OF THE UNIVERSITY OF ROCHESTER. *An Orientation in Science.* New York: McGraw-Hill Book Company, 1938. x+548 pp.

The purpose of this book as stated by its authors is: to present to the beginning student the scientific method of thought and procedure; a bird's-eye view of the principles and problems of the various sciences; an understanding of the interrelations of the several fields of science. This purpose is achieved by a brief introduction on the methods of science, followed by sections on astronomy, geology, chemistry, physics, biology, paleontology, physiology, bacteriology, psychology, mathematics, and finally, the scientific method.

It is a difficult task to keep steadily before a "beginning" student a clear picture of the scientific method while dwelling upon the most recent findings of science in many fields. The one objective obscures the other. Present-day science employs such an array of technical words and definitions (evidenced by an inspection of the index of this book) that one stands amazed at the capacity of a freshman mind that can acquire and appreciate any large percentage of them. The literary style of the book seems rather more academic than is needful, and it is a pity that the fine illustrations necessitate such avoirdupois weight. Colleges desiring to conduct an orientation course in science should certainly examine this book.

W. E. HENDERSON

SCHNEIDER, HERMAN. *The Problem of Vocational Guidance.* New York: Frederick A. Stokes Company, 1938. vii+108 pp.

As Dean of the College of Engineering and Commerce at the University of Cincinnati, Mr. Schneider has been in a position requiring a natural emphasis on vocational guidance. The work-study plan which the college follows brings vocational problems constantly to the fore in each student's daily work and long-range planning. The opportunities have therefore been exceptional for experimentation with many kinds of guidance procedures.

In this short book Dean Schneider sets forth the distillation of more than thirty years experience in this setting. He summarizes his philosophy, presents a criticism of vocational testing, and sets forth the principles on which he has based his own guidance procedures. He broadens vocational guidance into "life guidance," and by these convincing standards, shows how narrowly con-

ceived most vocational testing has been. He proposes as a more simple and workable scheme, the analysis of occupations in terms of such contrasts as manual or mental, indoor or outdoor, original or imitative, deliberate or impulsive, and the like. He shows how this approach to the study of occupations enables the guidance of students who are casting about for a suitable occupation. He relies on logic and experience to carry the weight of his case. Substantiating data in statistical form are not provided.

The style is simple and expressive. Thoughtful high-school youth, parents, teachers, and professional counselors will all find something which seems to have been especially prepared for them. To research workers, the method used in analyzing occupations can prove richly suggestive.

Ross L. Mooney

Ramsey, Grace Fisher, *Educational Work in Museums of the United States.* New York: H. W. Wilson Company, 1938. xiv+289 pp.

This is an expanded thesis and is a fact-finding study of 246 museums in the United States to uncover methods of conducting any sort of educational work. Those studied are listed in the Appendix, thus forming a Who's Who of American Museums. A 15-page bibliography is also included. Such a presentation is of value to every museum worker as a suggestion for possible endeavor; and, since only 210 museums in the United States out of over one thousand listed in the *1931 Handbook* reported any educational work, there seems to be opportunity for development there. The book is also of value to the student of educational problems, because of its minute report on methods in use.

After a statement of early attempts in the 1870's at inaugurating and developing an educational program, the chapters present various phases of present-day methods: adult education, teacher training, school classes, individual groups, field trips and nature trails, extension work, and the use of the radio.

The adult-education work usually consists of lectures and gallery talks. The tendency is toward active participation of the visitors and the development of study close to the museum objects. The extension work also brings these contacts close to the students through collections lent for school use, through the lending of lantern slides and motion-picture films, and through extramural lectures.

Miss Ramsey summarizes the trends in the last chapter where she says "the pioneer period in museum educational work may now be considered as completed." She then looks forward to the next fifty years in which will be developed increased participation for adults, closer co-operation with the schools, expanded teaching to specially gifted children (as well as to the handicapped), and teacher training for the skilled interpretation of museum materials. "The great task before the modern museum today is to learn how it can serve best."

F. K. W. Drury

Curtis, Francis D. *Investigations of Vocabulary in Textbooks of Science for Secondary Schools.* Boston: Ginn and Company, 1938. viii+127 pp.

This book is a summary of extended researches in vocabulary study of science textbooks. The introductory chapter surveys the important vocabulary

studies made in the field and outlines the problem. In the four chapters following the introduction the author discusses: pupil comprehension of words in context, vocabulary levels at which high-school pupils encounter marked difficulty in comprehension of science textbooks, investigations of vocabulary difficulty in textbooks of high-school science, the determination of scientific terms to be included in glossaries of textbooks of general science, biology, and chemistry.

The author draws several conclusions from his study:

1. Authors overestimate levels of vocabulary comprehension of pupils for whom they write.
2. Vocabulary difficulty starts at about the seven-thousandth word level on the Thorndike list.
3. Textbooks do not provide adequate repetition in the use of the words to ensure reasonable mastery.
4. Vocabulary difficulty is increased by the use of many difficult words which are not scientific terms.
5. Many scientific terms are used without definition, or when defined are frequently used in the text previous to the definition.
6. Textbook glossaries are generally non-existent or inadequate.

The author has listed basic glossaries in the fields of general science, biology, and chemistry. This listing should be of value to authors and also to teachers interested in obtaining an essential word list for expected mastery. A comprehensive bibliography of both published and unpublished books and reports on vocabulary study is included.

While the book will have certain values to teachers, the chief contribution will be found in its service to authors of textbooks. It is to be hoped that the well-documented conclusions drawn by Mr. Curtis will result in a simplification of the science reading materials made available to students of both junior– and senior–high-school sciences.

A. N. ZECHIEL

KANGLEY, LUCY. *Poetry Preferences in the Junior High School.* New York: Teachers College, Columbia University, 1938. 153 pp. (Teachers College, Columbia University, Contributions to Education, No. 758)

Basing her work on the assumption that it is more significant to discover why children like or dislike certain poems than it is to discover what poems children like or dislike, the author undertook an investigation to ascertain what interest elements in poetry children of junior–high-school age responded to positively. The study was carried on in Bellingham, Washington, and included all eighth-grade children in the public schools of that city—a total of 361 boys and girls.

The major purpose was to determine appeals that actually functioned with children in their choice of poems, and therefore the study was confined to poetry preferences. To help illuminate the problem, however, the investigator included as minor subsidiary studies prose preferences and preferences in activities of related cultural interests. The field of investigation was limited by selecting for study six certain appeals in poetry and by using 120 poems as experimental material, grouping the poems into six units of material of twenty poems each, one unit for each appeal to be tested. The poems were read aloud to ten classes of eighth-grade pupils in a series of experimental

periods extending over almost eight weeks. By means of the listings of poems liked and disliked; by the writing of themes telling why certain poems were chosen as ones best liked; by the use of interviews; and through discussion, information concerning the children's interpretations of their choices and the characteristics of well-liked poetry was secured.

The study is partial and experimental in nature for it is an investigation of a situation as it existed, and the choices of the children in this one situation and reasons for such choices are presented. Although the study is not in any sense final or definitive, the findings are significant in their implications for certain practices in the selection and presentation of poetry at the junior–high-school level. If from a number of investigations similar to this one reasons for preferences can be determined, criteria may be developed which will provide a sound basis for the recommendation of certain poems for use with children at this level.

FRIEDA M. HELLER

FARGO, LUCILE. *Activity Book for School Libraries.* Chicago: American Library Association, 1938. xi+208 pp.

Here is a practical, usable book, crammed with ideas and suggestions for "school activities in which the library plays a part." It truly lives up to this claim, for it includes not only activities of a true library character but also activities for all the curriculum subjects and general assembly undertakings in which the library has a share. The author makes no claim for originality but likens her work to a cookbook which collects from many sources. This, instead of lessening the value of the book, increases its worth. It is a splendid collection of such ideas given in clear, simple style. To make it still more useful the author has included, at the end of each chapter, an excellent list of references for further reading. These are well chosen and are a splendid key to the available literature concerned with each subject.

Miss Fargo presents each suggested activity briefly but clearly, pointing out advantages and pitfalls which may develop in its use. Stress on pupil initiative and interest carries throughout the book. In short, Miss Fargo has given the school-library world one more volume which will prove highly useful and make its own place in the book world.

RUTH E. SEEGER

JONES, ARTHUR J. *The Education of Youth for Leadership.* New York: McGraw-Hill Book Company, 1938. viii+246 pp.

This volume is written in textbook style, primarily for use by administrators, teachers, and teachers-in-training. Most space is given to a discussion of the educational systems of ancient Greece, ancient Rome, modern England, modern Russia, colonial and modern America. Differences in sociological background, in cultural aims, and in methods of selecting youth for advanced education are emphasized. A brief review is made of psychological studies of leadership, and in the final pages, recommendations are given for changes in current school practice.

The author presents little which is new. He makes two implicit assumptions which deny him that possibility. First, he assumes that the educational system of a culture is its way of training leaders, and consequently he needs only to discuss comparative education to be at the same time discussing educa-

tion for leadership. Second, he assumes that the answers to problems of defining leadership and describing the characteristics of leaders are to be "deduced" from psychological (and "objective") studies of leadership which have been made to date.

The outcomes of both the sociological and psychological treatments are "composites," failing of a convincing quality of their own. The final recommendations do not "grow out" of the preceding materials and might be found more effectively presented in modern textbooks on principles of education. The outlining and the section on Russia are good.

Ross L. MOONEY

STUERM, FRANCIS H. *Training in Democracy: the New Schools of Czechoslovakia.* New York: Inor Publishing Company, 1938. xiii+256 pp.

In the light of recent events, it becomes a melancholy task to review this account of education in what was one of the most promising of the newer republics of Europe. This work is published under the auspices of the Progressive Education Association and has a Foreword by W. Carson Ryan, Jr., president of that organization.

While it touches upon all levels and aspects of education in the republic, it does not provide an organized, systematic account of the whole such as that presented by S. K. Turosienski in his *Education in Czechoslovakia* (United States Office of Education Bulletin, 1935, No. 11). The present author's primary purpose, as indicated by the title, is to show the rise of progressive educational theory and practice and how the work of the theorists and the experimental schools has affected the more conservative schools. Much attention is given, therefore, to the work of individual teachers and schools.

The outstanding impression which one gets from the book is that of a new republic which contains numerous population groups differentiated sharply by language, religion, and cultural traditions, which is activated by a liberal democratic philosophy, and which has attempted, with a large degree of success, to develop an educational system in line with that philosophy. It is to be feared that within a very few years much of the material in this book will seem like ancient history. The treatment is characterized by rather loose construction, impressionistic method, and, in some places, by excessive use of short paragraphs.

R. H. ECKELBERRY

STRATEMEYER, CLARA. *Supervision in German Elementary Education, 1918–1933.* New York: Teachers College, Columbia University, 1938. vi+172 pp. (Teachers College, Columbia University, Contributions to Education, No. 729)

The study attempts to uncover the forces which caused the rapid and far-reaching changes in the purposes, techniques, and atmosphere of German elementary education under the Republic. It succeeds in presenting a thoroughgoing analysis of the operation of a co-operative type of self-supervision, and of the preparatory and probationary teacher training which made such self-supervision feasible. This analysis, which is well documented and authoritative, is based both on a study of legal provisions and on carefully planned visits to the schools of Prussia, Saxony, and Württemberg. It is preceded by an excellent account of the historical development of an authoritarian type of